

Environmental Management Systems for Small and Medium-Sized Businesses: Pilot Project

Presented by

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Pilot Project:

*Environmental Management
Systems for Small and
Medium-Sized Businesses*



Agenda for Panel Presentation

- Background for pilot project.
- California Environmental Protection Agency's (Cal/EPA) approach.
- Texas Commission on Environmental Quality's (TCEQ) approach.
- Linkage with other complementary transborder and CEC projects.
- Questions from audience.



What are EMSs?

- A systematic approach to how an organization understands and manages its environmental aspects and impacts, both regulated and unregulated.
- Part of an overall management system which includes practices, procedures, processes, and resources for developing, implementing, achieving, maintaining, and reviewing the organization's environmental policy.
- Based on W. Edwards Deming's Plan-Do-Check-Act continual improvement cycle, an internationally accepted model for how to organize a management system.



Basics of Pilot Project

- Test effectiveness of guidance document approved by Canada, Mexico and the U.S. in June 2000.
- Focus on small and medium-size businesses along U.S./Mexico border.
- Partner with two border states to achieve environmental results that may be transferable to other states or countries.



Role of Small Businesses in U.S. Economy

- U.S. Small Business Administration estimates small businesses represent 99% of all employers. Small business – 500 employees or less.
- In 2001, 22.4 million small businesses in U.S.
- Employ 51% of private-sector workers.



EMSs and EPA's Innovation Strategy

- May 2002, Position Statement on EMSs – EPA will encourage widespread use of EMSs across a range of organizations and settings, with particular emphasis on adoption of EMSs to achieve improved environmental performance and compliance, pollution prevention through source reduction, and continual improvement.



EMSs and EPA's Innovation Strategy

- Focus on environmental performance and results.
- Strengthen innovation partnership with States and tribes.
- Diversify and make full use of new tools and approaches.



EPA's Partnership with Commission for Environmental Cooperation (CEC)

- CEC established pursuant to the environmental side agreement to the North American Free Trade Agreement (NAFTA) – Canada, Mexico and U.S.
- CEC addresses North American environmental concerns, helps prevent potential trade and environmental conflicts and promotes the effective enforcement of the three countries' respective environmental laws.



CEC's EMS Work

- 1997 – CEC Council Resolution directed Enforcement Working Group under Law and Policy area to explore relationship between voluntary EMSs and government compliance and enforcement programs.
- EPA's Office of Planning, Policy Analysis & Communications under Office of Enforcement and Compliance Assurance (OECA) works with CEC Enforcement Working Group on EMS issues.
- June 2000, CEC published guidance document, “Improving Environmental Performance and Compliance: 10 Elements of Effective Environmental Management Systems.”



Purpose of CEC 10 Elements

- States what Canada, Mexico and U.S. have agreed is important to address in EMSs.
- Developed to serve as useful complement to existing EMS models.



Focus of CEC 10 Elements

- Compliance.
- Performance that goes beyond compliance.
- Pollution prevention that emphasizes source reduction.
- Sharing performance information with stakeholders.
- Align with existing EMS models in focusing on developing an environmental policy, establishing objectives and targets, enhancing training, and refining document control.



Project to Test Effectiveness of CEC 10 Elements

- Office of Planning, Policy Analysis & Communications is funding through cooperative agreements a pilot project to train and assist small and medium-size businesses in developing an EMS that will incorporate the CEC 10 Elements.
- TCEQ: Has already provided technical assistance to several businesses. Project complements existing TCEQ work on EMSs.
- Cal/EPA: Focuses on sources of transborder pollution from small businesses. Data gathered will determine selection of participants.



Project Implementation

- Both states will use an implementation strategy focused on specific sectors and develop performance measures.
- Implementation approaches tailored to meet respective needs of states.
- Pilot envisioned as multi-year project.



Next Steps

- Develop performance measures for participating businesses.
- Explore to what extent both states can use same technical assistance materials, same approach for delivering the assistance, and eventually focus on same sectors.
- Share experience on what motivates businesses to participate and stay the course to develop an EMS.
- Report on performance results.
- Build upon experience by linking with other complementary transborder and CEC projects.



Websites for More Information on EMS Activities

- www.epa.gov/ems
- www.eps.gov/clearinghouse
- www.epa.gov/oeca
- <http://es.epa.gov/oeca/main/strategy/crossp.html> - compliance audit protocols
- www.epa.gov/dfe/ - Design for Environment
- www.mswg.org - Multi-state Working Group
- www.wbcd.ch/ - World Business Council for Sustainable Development
- www.wri.org/capmarkets/pureprofit.html - World Resources Institutes
- Updike.beverly@epa.gov or 202-564-7142



Cal/EPA Border Affairs Unit

The CEC EMS Pilot Project in the California – Baja California Border Region

Chris Marxen
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History of EMS Programs in California

In 1998, the California Environmental Protection Agency (Cal/EPA) established an *Innovation Initiative* as a response to the growing international interest in achieving a sustainable global environment.

Because of the significant policy implications of the *Innovation Initiative*, the Legislature authorized the Cal/EPA to establish up to eight pilot projects with which to evaluate the potential of EMS in California.



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History of EMS Programs in California

The Pilot Project

Seven Industries Selected:

1. Anheuser-Busch Brewery, Fairfield
2. Two publicly owned wastewater treatment facilities
3. IBM Corporation, San Jose
4. Lockheed Martin Aeronautics Company, Palmdale
5. Two metal finishing facilities (one did not complete the project)
6. Pentel of America, Ltd., Torrance
7. Two Sonoma County wineries



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The Pilot Project (cont)

Findings:

- Significant improvements in environmental protection were observed in most of the pilot projects.
- Improved systems for managing environmental impacts were observed in many of the pilot projects.
- Some improvement in environmental performance was observed at all pilots reporting performance data.



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History of EMS Programs in California*

The Pilot Project (cont)

Findings (cont):

- EMS implementation can be especially challenging to small and medium sized enterprises (SMEs).

One challenge is the significant economic and human resources needed to develop, implement and maintain an EMS.



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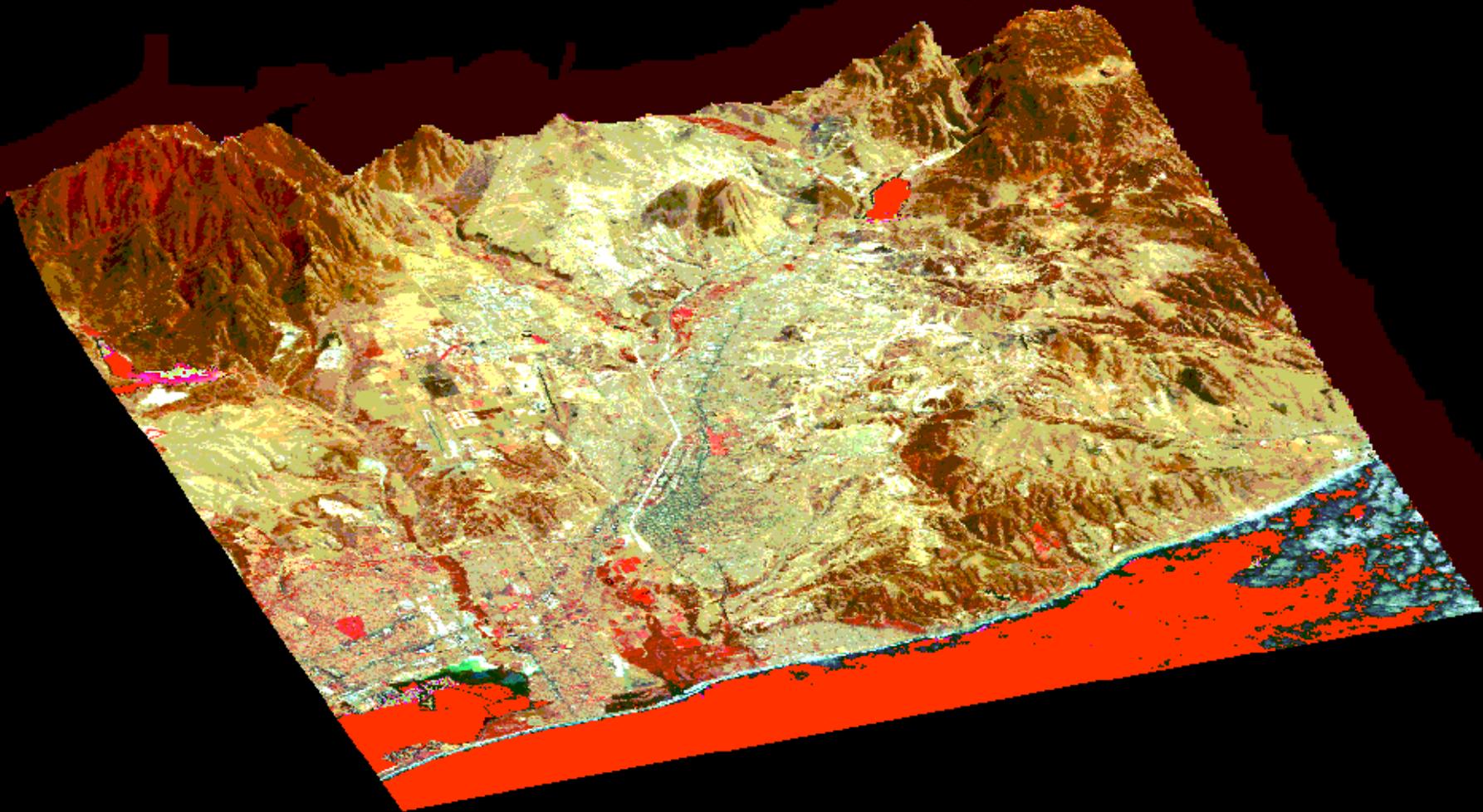
The Border Environmental Program EMS Project

USEPA Grant

Past Programs

What We Want to Accomplish





San Diego - Tijuana

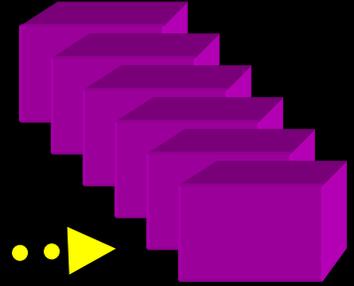
**Medium - Large
Businesses**



Sub-Assemblies



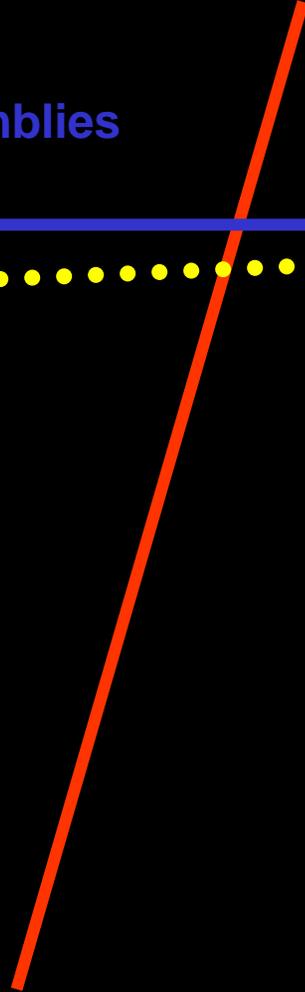
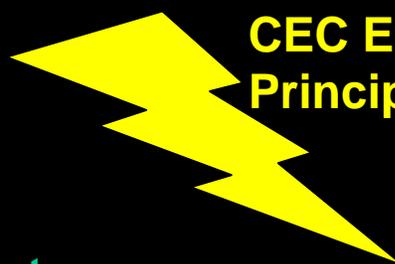
Cottage Industries



Finished Product



**CEC EMS
Principles**



San Diego County

Tijuana B.C.

Implementation Plan



Cal/EPA Border Affairs Unit

*The CEC EMS Pilot Project in the California –
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**The Border Environmental Program
EMS Project (cont)**

Success Indicators:

- *Compliance*
- *Energy Usage*
- *Discharges*
- *Economic Success*



Cal/EPA Border Affairs Unit

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The Border Environmental Program EMS Project (cont)

Supplementary Goals:

- *Development of Environmental Technology Industries*
- *Coordination with U.S. EPA / SEMARNAT Border 2012 Program*
- *Improvement of Environmental Infrastructure*
- *Cleanup of Neighborhoods*

Environmental Management Systems for Small Businesses along the Border



Ken Zarker

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Project Partners

- U.S. Environmental Protection Agency
- California Environmental Protection Agency
- Texas Commission on Environmental Quality (formerly TNRCC)



Project Purpose

- ... to train and provide technical assistance to small or medium-sized companies in developing and implementing, or improving an EMS using the North American Commission for Environmental Cooperation's (CEC) guidance document: Improving Environmental Performance and Compliance: 10 Elements of Effective Environmental Management Systems. In addition, the TNRCC will implement this project as part of its EMS program ...



CEC Elements

- Environmental Policy
- Environmental Requirements and Voluntary Undertakings
- Objectives and Targets
- Structure, Responsibility and Resources
- Operational Control



CEC Elements (cont'd)

- Corrective and Preventive Action and Emergency Procedures
- Training, Awareness and Competence
- Organizational Decision-making and Planning
- Document Control
- Continuous Evaluation and Improvement



Texas EMS Components

- Write an environmental policy directed toward continuous improvement
- Identify the environmental aspects at the site
- Prioritize these environmental aspects by the significance of the impacts at the site
- Set the priorities, goals, and targets for continuous improvement in environmental performance and for ensuring compliance with applicable environmental laws, regulations, and permit conditions



Texas EMS Components (cont'd)

- Assign clear responsibility for implementation, training, monitoring, and taking corrective action and for ensuring compliance with applicable environmental laws, regulations, and permit conditions
- Document the implementation procedures and the results of so doing
- Evaluate, on a routine schedule, the refinement to the EMS to demonstrate how attainment of the priorities, goals, and targets of the system has improved



Border EMS Workshop

- August 14, 2001 Brownsville, TX
- 75-100 Attendees
- Attendees from both sides of the border
- Attendees included small and large businesses, local governments, and maquiladoras



Five Businesses Selected

- Valley Co-op Oil Mill
- Rio Grande Valley Sugar Growers
- Big Tex
- Flexaust
- Discovery Recycling



Valley Co-op Oil Mill

- Harlingen, TX
- Cottonseed oil mill
 - Cottonseed oil
 - 1st trimming of cotton fibers from seed to feminine hygiene industry
 - 2nd trimming of cotton fibers to food industry
- 76 Employees



Rio Grande Valley Sugar Growers

- Santa Rosa, TX
- Sugar cane processing mill
 - Raw sugar
- Employees vary from 100 in the off season to 500 during full production



Texas Citrus Exchange

- Mission, TX
- Juice processing plant
 - Grapefruit juice
 - Orange juice
 - Other juices
- ??? Employees



Flexaust

- El Paso, TX
- Manufactures vacuum cleaner hoses and belts
- 120 employees



Discovery Recycling

- El Paso, TX
- Recycling
 - Plastics
 - Precious Metals
- Reworking Electronics
- 15 Employees



Implementation Process

- Compliance Assistance Visit
- Site Assistance Visit
- EMS Implementation Assistance
- Texas EMS Evaluation Visit (optional)



Compliance Assistance Visit

- Reviews compliance with all regulatory requirements
- All companies have received their visit



Site Assistance Visit

- Focused on pollution prevention and introduction of EMS concept
- All companies have received their visit



EMS Implementation Visits

- One-on-one visits as needed
 - Design assistance
 - Implementation assistance
- Model EMS documentation
- Initial visits conducted or scheduled
 - Valley Co-op Mills - completed
 - Rio Grande Valley Sugar Growers - Dec. 4
 - Texas Citrus Exchange - Dec. 3
 - Flexaust - completed
 - Discovery Recycling - completed



Model EMS Documents

- Model documents in 2nd draft; final draft expected by Mid-January, 2003
- Model includes
 - Emphasis on producing behavior change
 - Explanation of the parts of an EMS and the purpose of each
 - Examples of documents and forms that could be used in EMS documentation



Texas EMS Evaluation

- Determine if the EMS as implemented meets the requirements of the Texas EMS program for basic level EMS
- Evaluation team will consist of TCEQ staff who have not participated in any other portion of the implementation process



Performance Measures

- Emission of O₃ Depleting Gases
- Emission of VOCs Emission of NO_X
- Emission of Sulfur Dioxide (SO₂)
- Emission of Particulate Matter (PM₁₀)
- Emission of CO
- Emission of CO₂
- Emissions of Cl



Performance Measures (cont'd)

- Energy Use/Conservation (Total)
- Water Use / Conservation (Total)
- Waste
- Total Solid Waste
- Total Hazardous Waste
- Money Saved



What's Next

- Refinement of small business EMS model based on the experience of these companies
- Spread the word to the small business community along the border
 - Workshops
 - One-on-one through site assistance visits, calls to the small business hotline, and other contacts
 - Website: borderP2.org or fronteraambiental.org

BorderP2.org
Or
Fronteraambiental.org



U.S. / Mexico Border Environmental Performance Pollution Prevention and Environmental Management Systems Initiative 2002-2003 Project Summary

SUMMARY

A public/private partnership has been established along the U.S./Mexico border to promote environmental stewardship for small to medium-sized entities through pollution prevention and environmental management systems.

The partnership is promoting the awareness and development of Environmental Management Systems (EMSs) in the border region based on the North American Commission for Environmental Cooperation's (CEC) guidance document: ***Improving Environmental Performance and Compliance: 10 Elements of Effective Environmental Management Systems.***

The partnership is working to coordinate the reduction of pollution through a broad range of approaches, including onsite technical assistance, training and information dissemination.



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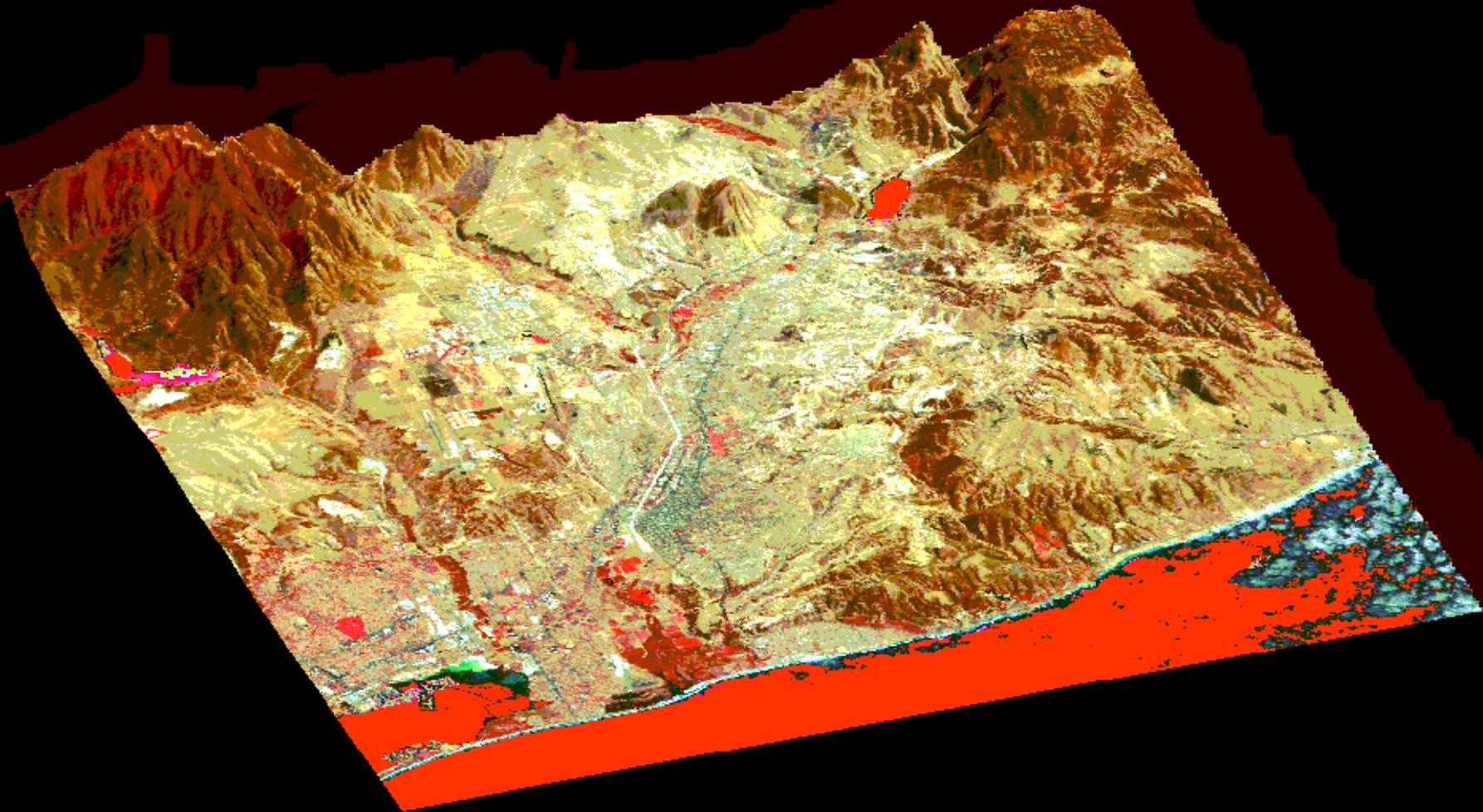
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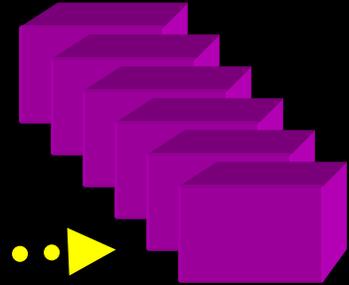
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